

# PATENT ABSTRACTS OF JAPAN

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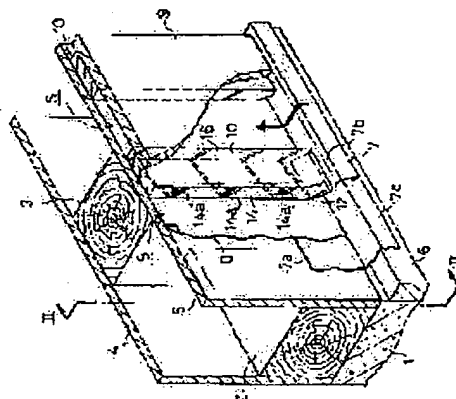
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## (54) LONGITUDINAL FURRING STRIP FOR BUILDING AND EXTERIOR WALL STRUCTURE USING IT

(57)Abstract:

**PROBLEM TO BE SOLVED:** To provide longitudinal strips for buildings and a exterior wall structure using them, capable of holding down moisture collected at air shafts and preventing exterior wall furrings and structural members from corroding so as to discharge dewdrops and rain at end corners and so on into the outside speedily.

**SOLUTION:** Longitudinal strips 10 are placed between an exterior wall furring 5 and finish 9 side by side with some distances and as a result there are vertical air shafts between them. The vertical strip 10 has water-drop guide means (concave grooves 14a) that slopes below the outside at the side front to a shaft S.



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**CLAIMS**

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[Claim(s)]

[Claim 1] The structural length furring strip characterized by having prepared more than one between the outer wall substrate material of a building, and outer wall finishing material as it estranged to the side mutually, and forming a waterdrop guidance means to incline toward an outside lower part in the side face which is the vertical furring strip which turns to the vertical direction in which the aeration way which turns to the vertical direction among them was formed, and faces an aeration way.

[Claim 2] The structural length furring strip according to claim 1 which established a waterdrop guidance means by which inclined downward toward the side in the inside which touches outer wall substrate material, and a lower limit followed the waterdrop guidance means of a side face.

[Claim 3] The structural length furring strip according to claim 1 or 2 which made the lower limit side the inclined plane which inclines downward [ outside ].

[Claim 4] The structural length furring strip according to claim 1 to 3 which made the waterdrop guidance means the concave which \*\*\*\*(ed) to the side face or the inside.

[Claim 5] The structural length furring strip according to claim 1 to 3 which made the waterdrop guidance means of a side face the protruding line.

[Claim 6] Outer wall structure of the building characterized by using a structural length furring strip according to claim 1 to 5 as said vertical furring strip in the outer wall structure of the building, which the side was made to estrange mutually two or more vertical furring strips which turn [ external surface / of the outer wall substrate material of a building ] to the vertical direction, and fixed, and fixed outer wall finishing material on the external surface of said vertical furring strip.

[Claim 7] Outer wall structure of a building according to claim 6 where stuck the moisture permeation saposhnikovia root sheet on the external surface of outer wall substrate material beforehand, and the vertical furring strip was prepared in the outside.

[Claim 8] Outer wall structure of a building according to claim 6 or 7 where the ridge material which turns to a longitudinal direction equipped with the inclined plane which is located in the outside of the lower limit section of outer wall substrate material under the vertical furring strip, and inclines downward [ outside ] was prepared.

[Claim 9] Outer wall structure of a building according to claim 6 to 8 where the clearance was prepared between the lower limit of outer wall finishing material, and the inclined plane of ridge material.

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**DETAILED DESCRIPTION**

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[Detailed Description of the Invention]

[0001]

[Field of the Invention] Between the outer wall substrate material of a building, and outer wall finishing material, as this invention is mutually estranged to the side, they are prepared, and they relate to the structural length furring strip which turns to the vertical direction in which the aeration way which turns to the vertical direction among them was formed, and the outer wall structure of the building using it. [ two or more ]

[0002]

[Description of the Prior Art] In the outer wall structure of the conventional building using the above vertical furring strips, waterdrop, such as dew condensation water adhering to the lateral surface of outer wall substrate material, the side face of a vertical furring strip, etc. or storm sewage, is discharged besides a building along the inclined plane which inclines downward outside the ridge material which flowed caudad along those side faces, and was attached in the lower limit section of outer wall substrate material.

[0003]

[Problem(s) to be Solved by the Invention] However, waterdrop tends to collect on the corner which the external surface of outer wall substrate material and the side edge side of a vertical furring strip cross, and while becoming the cause which mold etc. generates, an aeration way is covered with moisture, and it has also become the cause which structure material etc. corrodes in outer wall substrate material and a vertical furring strip, and a list.

[0004] This invention by discharging promptly waterdrop, such as dew condensation water collected on the corner etc., or storm sewage, outside in view of the above troubles which a Prior art has It stops that an aeration way is covered with moisture, and aims at offering the structural length furring strip which enabled it to prevent that structure material etc. corrodes in outer wall substrate material and a vertical furring strip, and a list, and the outer wall structure of the building using it.

[0005]

[Means for Solving the Problem] According to this invention, the above-mentioned technical problem is solved as follows.

(1) Between the outer wall substrate material of a building, and outer wall finishing material, as it estranges to the side mutually, more than one are prepared, and it is the vertical furring strip which turns to the vertical direction in which the aeration way which turns to the vertical direction among them was formed, and form a waterdrop guidance means to incline toward an outside lower part in the side face facing an aeration way.

[0006] (2) Establish a waterdrop guidance means by which incline downward toward the side in the inside which touches outer wall substrate material, and a lower limit follows the waterdrop guidance means of a side face, in the above-mentioned (1) term.

[0007] (3) Let a lower limit side be the inclined plane which inclines downward [ outside ] in the above (1) or (2) terms.

[0008] (4) Consider as the concave which \*\*\*\*(ed) the waterdrop guidance means to the side face or the inside in either of the above-mentioned (1) - (3) terms.

[0009] (5) Let the waterdrop guidance means of a side face be a protruding line in either of the above-mentioned (1) - (4) terms.

[0010] (6) Use the structural length furring strip of a publication for either of the above-mentioned (1) - (5) terms as said vertical furring strip in the outer wall structure of the building which the side was made to estrange mutually two or more vertical furring strips which turn [ external surface / of the outer wall substrate material of a building ] to the vertical direction, and fixed, and fixed outer wall finishing material on the external surface of said vertical furring strip.

[0011] (7) In the above-mentioned (6) term, stick a moisture permeation saposhnikovia root sheet on the external surface of outer wall substrate material beforehand, and prepare a vertical furring strip in the outside.

[0012] (8) Prepare the ridge material which turns to a longitudinal direction equipped with the inclined plane which is located in the outside of the lower limit section of outer wall substrate material under the vertical furring strip, and inclines downward [ outside ] in the above (6) or (7) terms.

[0013] (9) Prepare a clearance in the above-mentioned (6) - (8) term between the lower limit of outer wall finishing material, and the inclined plane of ridge material.

[0014]

[Embodiment of the Invention] Hereafter, 1 operation gestalt of the structural length furring strip of this invention and the outer wall structure of the building using it is explained, referring to an accompanying drawing. In addition, in the following explanation, make upper left direction of drawing 1 into the inside, and let lower right direction be an outside.

[0015] In the top face of the foundation (2) established on the mat foundation (1) which turns to a longitudinal direction, spacing is separated mutually, and it is set up by the longitudinal direction (illustrates only one piece) on it. [ two or more columns (3) and ]

[0016] A wall (4) fixes to a foundation (2) and the medial surface of (3), and, similarly outer wall substrate material (5) has fixed to the lateral surface, respectively.

[0017] In the lateral surface of a mat foundation (1), the level basic cladding material (6) which makes the role of a heat insulator has fixed.

[0018] In the lateral-surface lower part of outer wall substrate material (5), the perpendicular piece of a radical (7a) of the top in the level ridge material (7) of the side view crank mold cross section for discharging waterdrop on the outside of a building has fixed. Ridge material (7) bends the metal plate of one sheet, is formed, and has the above-mentioned piece of a radical (7a), the piece of an inclination (7b) which extends so that it may incline downward [ outside ] from the lower limit, and the piece of suspension (7c) which hangs from the lower limit of the piece of an inclination (7b). Width of face of the direction of inside and outside of the piece of an inclination (7b) is made into size from the thickness of a basic cladding material (6), and it is made for the waterdrop which drips from the piece of suspension (7c) by it to have not contacted the lateral surface of a basic cladding material (6).

[0019] Although it lets moisture pass, the moisture permeation saposhnikovia root sheet (8) with a smooth front face it was made not to let a wind pass is stuck on the lateral surface of outer wall substrate material (5), and the lateral surface of the piece of a radical (7a) of ridge material (7).

[0020] Two or more vertical furring strips (10) which turn [ external surface / of a moisture permeation saposhnikovia root sheet (8) ] to the vertical direction which supports outer wall finishing material (9) separated spacing mutually to the longitudinal direction, and have fixed by the nail stop etc.

[0021] As shown in drawing 3, a vertical furring strip (10) consists of a narrow-width plate cut so that the inclined plane (11) an up-and-down end face turns [ inclined plane ] to an outside lower part, and (12) might be made, from one side edge, it applies to the side edge of another side, and two or more concaves (13a) which incline with whenever [ downward tilt-angle / of about 60 degrees ] are mutually prepared in the inside (13) with regular intervals in parallel.

[0022] moreover, to the side face (14) of right and left of a vertical furring strip (10), and (15) The edge of a concave (13a) is followed in the corner of the side face (14), (15), and an inside (13). And from there, it applies to the radial border and two or more concaves (14a) (15a) which go caudad and incline outside with whenever [ downward tilt-angle / of about 60 degrees ] are mutually prepared with regular intervals in parallel.

[0023] As shown in drawing 1 and drawing 2, in the external surface (16) of a vertical furring strip

forward  
the  
position  
or  
rear of  
body

(10) The clearance for open air introduction was formed between the lower limit and piece of an inclination (7a) of ridge material (7), and tabular outer wall finishing material (9) has made and fixed. By that cause The aeration way (S) a lower limit turns [ way ] to the vertical direction to open for free passage with the exterior is formed of two vertical furring strips (10) which adjoin mutually outer wall substrate material (5) and outer wall finishing material (9), and (10).

[0024] According to a configuration like this operation gestalt, to the lateral surface of outer wall substrate material (5), and twist accuracy The external surface of a moisture permeation saposhnikovia root sheet (8), Waterdrop, such as dew condensation water collected on the corner which the side face (14) of right and left of a vertical furring strip (10) and (15) cross, or storm sewage Since it flows down along with a concave (14a) (15a) as it separates from a moisture permeation saposhnikovia root sheet (8) promptly, and sequential flowing down is further carried out along the inside of outer wall finishing material (9), and the inclined plane (7b) of ridge material (7), it is prevented that waterdrop piles up in the above-mentioned corner for a long period of time.

[0025] Moreover, since waterdrop collected on the gap of the external surface of outer wall substrate material (5) and the inside (13) of a vertical furring strip (10) which sandwich a moisture permeation saposhnikovia root sheet (8) is guided along with a concave (13a) so that it may flow down promptly aslant toward one above-mentioned corner, waterdrop does not pile up in the above-mentioned gap for a long period of time.

[0026] In addition, the concave (13a) in the inside (13) of a vertical furring strip (10) may be omitted according to a situation. For example, when not using a moisture permeation saposhnikovia root sheet (8) between outer wall substrate material (5) and a vertical furring strip (10), or when the adhesion of outer wall substrate material (5) and a vertical furring strip (10) is very good, even if it does not prepare a concave (13a), sufficient waterdrop removal effectiveness is acquired.

[0027] Although whenever [ downward tilt-angle / of a concave (13a) (14a) (15a) ] is suitably appointed according to the width of face of the field in which they are prepared etc., in order to promote flowing down of waterdrop, it is usually good to consider [ 45 degrees or more ] as 50-70 degrees preferably.

[0028] In the above-mentioned operation gestalt, although the waterdrop guidance means was made into the concave (13a) (14a) (15a) It is good also as two or more protruding lines (18a) (19a) which incline toward the outside lower part which protruded on the side face (18) of right and left of a vertical furring strip (17), and (19) like the 2nd operation gestalt of the structural length furring strip of this invention which replaces with this, for example, is shown in drawing 4.

[0029] In the outer wall structure of a building which shows this vertical furring strip (17) in drawing 1 and drawing 2 It not only can do so the operation effectiveness same in the 1st operation gestalt, but [ if it replaces with and uses for a vertical furring strip (10), ] The air which flows an aeration way (S) upward can be curved to the inner sense, and the effectiveness that the corner which the external surface of outer wall substrate material (5) and the side face (18) of a vertical furring strip (17) which waterdrop tends to collect, and (19) cross can be dried at an early stage can also be done so.

[0030] Moreover, a vertical furring strip (10) and (17) may be formed for example, not only with wood but with a synthetic-resin ingredient metallurgy group ingredient etc.

[0031]

[Effect of the Invention] Since showing around so that waterdrop, such as dew condensation water collected on the corner which the external surface of outer wall substrate material and the side face of a vertical furring strip cross, or storm sewage, may go caudad and may flow down outside promptly with a waterdrop guidance means, and piling up in the above-mentioned corner for a long period of time is prevented according to invention claim 1 and given in six, it can prevent that an aeration way is covered with moisture.

[0032] While it can protect that mold etc. occurs in an aeration way, the corrosion of structure material etc. can be prevented in outer wall substrate material and a vertical furring strip, and a list.

[0033] According to invention according to claim 2, waterdrop collected on the gap of the external surface of outer wall substrate material and the inside of a vertical furring strip is promptly discharged to the 1 side of the inside of a vertical furring strip, and by there to the configuration according to claim 1, since it can discharge promptly caudad outside further, the waterdrop removal

effectiveness of an aeration way can be heightened further.

[0034] According to invention according to claim 3, the waterdrop adhering to the lower limit of a vertical furring strip can be guided so that it may flow down in an outside lower part, and it can prevent that waterdrop adheres to the external surface of outer wall substrate material.

[0035] If a waterdrop guidance means is made into a concave, while being able to form a waterdrop guidance means in a vertical furring strip easily like invention according to claim 4, when a waterdrop guidance means does not become the attachment to the outer wall substrate material and outer wall finishing material of a vertical furring strip with hindrance and makes the depth of a concave deep, a lot of moisture can be guided.

[0036] If a waterdrop guidance means is made into a protruding line, while being able to catch more certainly the waterdrop which collects on the corner which the lateral surface of outer wall substrate material and the side face of a vertical furring strip cross, and is going to flow and fall to it and being able to make an outside lower part flow down it like invention according to claim 5, the air which flows the inside of an aeration way upward can be curved toward the above-mentioned corner, and the above-mentioned corner can be dried promptly.

[0037] According to invention according to claim 7, the indoor moisture of a building can be made to discharge outside promptly.

[0038] According to invention according to claim 8, the waterdrop dropped on the inclined plane of ridge material from the lower limit of a vertical furring strip etc. can be discharged along the inclined plane of ridge material in the direction which separates from the external surface of outer wall substrate material.

[0039] Since the open air can be adopted on an aeration way from the clearance between an outer wall finishing material lower limit and the inclined plane of ridge material according to invention according to claim 9, the rise of the humidity of an aeration way can be controlled.

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**DESCRIPTION OF DRAWINGS**

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[Brief Description of the Drawings]

[Drawing 1] It is the expansion perspective view of an important section showing 1 operation gestalt of the structural length furring strip of this invention, and the outer wall structure of the building using it.

[Drawing 2] Similarly, it is the II-II line sectional view of drawing 1.

[Drawing 3] Similarly, it is the expansion perspective view which omitted the pars intermedia of a structural length furring strip.

[Drawing 4] It is the expansion perspective view which omitted the pars intermedia of the 2nd operation gestalt of the structural length furring strip of this invention.

[Description of Notations]

- (1) Mat foundation
- (2) Foundation
- (3) Column
- (4) Wall
- (5) Outer wall substrate material
- (6) Basic cladding material
- (7) Ridge material
- (7a) The piece of a radical
- (7b) The piece of an inclination
- (7c) The piece of suspension
- (8) Moisture permeation saposhnikovia root sheet
- (9) Outer wall finishing material
- (10) Vertical furring strip
- (11) Inclined plane
- (12) Inclined plane
- (13) Inside
- (13a) Concave (waterdrop guidance means)
- (14) (15) side faces
- (14a) Concave (15a) (waterdrop guidance means)
- (16) External surface
- (17) Vertical furring strip
- (18) (19) side faces
- (18a) Protruding line (19a) (waterdrop guidance means)
- (S) Aeration way

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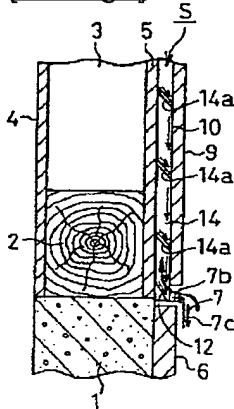
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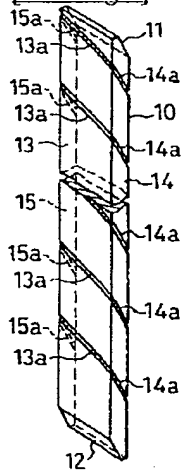
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## DRAWINGS

[Drawing 2]



[Drawing 3]



[Drawing 4]





